DOCUMENT RESUME

ED 251 836 CS 208 678

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TITLE The Impact of New and High Technology upon University Instruction in Mass Communication.
PUB DATE Apr 84
NOTE 16p.; Paper presented at the Meeting of the Western Social Science Association (San Diego, CA, April 1984).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Communications; *Course Content; Course Objectives; *Curriculum; *Educational Research; Educational Technology; Higher Education; *Journalism Education; Mass Media; School Surveys; Teaching Methods; *Technological Advancement

ABSTRACT

A pilot study of 40 accredited journalism and communications departments was conducted to see whether their curricula reflected the impact of new technologies on the mass media. New technology was defined as including pagination, cable and cable hardware, computer front end systems, electronic libraries, satellite systems, and laser and fibre optic transmission. The survey asked respondents to indicate whether (1) their academic programs offered a specific course that included uses and applications of "new technologies" in media; (2) they had other courses that included an instructional unit about "new technology" if their programs did not offer a specific "new technologies" course; and (3) they anticipated developing a course that focused on new technologies and their uses and applications. Nineteen institutions responded to the survey, too few to draw definite conclusions. The results, however, did indicate a possible trend. Many of those schools that do not presently have or do not plan to develop courses devoted to the impact of technology on journalism are including units on the subject in other courses, and seven of the schools intend to institute specific courses about the new technology within the next few years. (RBW)

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THE IMPACT OF NEW AND HIGH TECHNOLOGY UPON UNIVERSITY INSTRUCTION IN MASS COMMUNICATION

by

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April 1984

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Even the most casual reader of professional or scholarly literature concerned with the mass media and higher education is aware that information technology on college campuses is undergoing explosive growth. At the same time, rare is the institution or the program which takes a long-range look at or a comprehensive view of the overall planning occuring at other educational institutions throughout the nation. Rather, each institution is developing its own system for use of high and new technology. What's more, in spite of the overwhelming volume of information about the uses and abuses of information technology, not much has been said about why such developments are taking place.

As Marc S. Tucker, the director of the project on Information Technology and Education for the Carnegie Foundation, puts it;

> There is very little in print about why these developments are taking place, what institutional leaders expect the benefits to be, what plans are being made to translate hardware information into better instruction, how information technology is actually changing the lives of students and staff or the nature of the instution itself.[1]

Tucker explores in depth the various applications of high tech and new tech at three major universities--the "Star Wars" institutions, as he terms them. The three are Carnegie-Mellon, Brown and M.I.T. At all three, the primary use of new technology-defined in the paper as the utilization of myriad communications processes made possible through the use of microchips, computers and telecommunications networks-is essentially for

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scientific, computational and research purposes in those disciplines traditionally designated as the "hard sciences."

But Tucker also details what some other universities are doing with new technology. He cites the exploratory work being done with computers and new technology at the University of Maryland, Colorado State University, the University of Illinois and Milwaukee Area Technical College. At all of these, the emphasis has shifted from the traditional two uses of computers--conducting quantitative research and teaching the computer to instruct people--to more innovative applications such as writing instruction, situation and case study simulations, literary criticism, and other similar uses which have historically been considered the qualitative or creative domain.[2] Even so, Tucker perceives a lack of unified direction.

One discipline in particular has jumped into the monstrous new technology pool and is vigorously stroking and splashing its way toward some goal. The leap into the water was prompted by the adoption of new and high tech hardware and software by the major professional media organizations in the world, most notably those in Great Britain and more recently the United States. For the past 10 or so years, journalism and telecommunications programs throughout the country seemed to believe that if they didn't maintain technological pace with the professional media, they would lose the race and drown. They were apprehensive that graduates would not find jobs because they "...didn't know how to operate a video display terminal" or "they didn't know how to plan a simple computer program."

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Unfortunately, at some--not all--institutions, the zeal to become part of the technological revolution overpowered the primary purpose of mass media training programs. That purpose was--and still should be--to teach students to think--analytically, critically, intelligently. John L. Perry explored this concept in his thoughtful "Technology Is not Journalism" article" in Quill. As he phrased it, "There will be no role for journalism in the electronic future if we concentrate only on the medium and not its content."[3] Perry emphasized that those involved in mass communication must be more than keyboard operators linked to a mainframe which will correct spelling, make up pages and size headlines so that they fit into holes on a smartly designed four-color front page. He assails the television stations and media chains which offer promises of instant information about any given subject if the viewer only punches the right button on a hand-held home computer.

Perry says this about the educational process which mass communication practitioners need:

> To be a journalist amid today's complex puzzles, such as brain-blowers like genetic cloning and nuclear annihilation, it takes a broadly-educated mind. True, to be a journalist you must know how to read, write, spell, and think logically. It helps also to have mastered the basic tricks of the trade, such as writing a lead or focusing a camera. But, what is needed even more than that is a knowledge of this facinating world: geography, biology, economics, philosophy, sociology, music, law, sports, agriculture, political science, literature, mathematics, religion. You name it and as a journalist you will have to be explaning it some day to an audience that depends on you to give it more than 'just the facts.'
>
> An education for journalism, then, is an education for living in a world rampant with change. Without that kind of education, the journalist in such a world stands a very real chance of going the way of the dinosaur, whose fatal sin was that he could not understand the changes taking place around him and, thus, could not adapt to change. Be they animals or journalists,

> those who cannot master or even adapt to change are doomed to be destroyed by change, in one way or another.[4]

Perry is not the only one to be critical of the institutional journalistic rush to new technology as a panacea for some oft-cited mass media problems. Rob Oglesby, a former college professor who now works for the Gainesville Sun, reported that his research about university mass communication programs indicated that new technology was not the answer to training good journalists. He quoted from Henry Price of the University of Southern California who described the USC philosophy as being that basic reporting and editing are better taught without the machines. Students "...concentrate on editing, writing and other journalism skills, not the machine,." [5]

Aumente addresses the same concern when he discusses the difficulties reporters have in adapting to the physical limitations of the new technology in reporting and writing:

> It is a technology of promise and contradiction, of limitless horizons and claustrophobic spaces. Journalists have an ocean of news and information in giant computers that they can instantly update and transmit nationwide. Yet they must deliver it a cupful at a time--screen by screen. The screen can hold sixteen to twenty-four lines of copy, forty characters across; which means anywhere from fifty to seventy words per screen.
>
> 'You find yourself hunching in your shoulders in a narrow space--not writing in a pyramid style but in a little box,' a videotex editor said. 'When you actually do it, you realize how constrained you are. It's a bitch.' [6]

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Yet the rush toward the Olympian-size communication technology pool continues. And it is not limited to universities. Dean, in her article "Computers: There Are Even More Advantages for the High School Journalism Program" urges fellow high school journalism instructors to join

the computer revolution. In rather romantic, though perhaps not realistic terms, she says:

> I would suggest that computers have the potential of occupying so much of your attention that there is a definite resemblance to an affair of the heart--including its frustrations. ...Time is more necessary than money when entering the computer world. Remember the analogy to a loving relationship. Such relationships are enriched according to the quality of time spent with one another; this is true of the computer also.[7]

At the same time Dean waxes eloquent over her romance with the computer, Presstime reports that high school educational programs, particularly in journalism, are under fire because they have shifted from their primary goal of teaching students to think and write critically. It is suggested that a "back to basics" approach such as advocated in the National Commission on Excellence in Education report, "A Nation at Risk: The Imperative for Educational Reform," may well replace journalism as it is currently being taught in high schools across the country.[8]

How pressured are colleges and universities which offer mass communications programs to enter the new technology era? Becker explored this question for the Association for Education in Journalism and Mass Communication. In 1983, he reported that 77 schools, or 37.4 percent of the 206 college journalism programs which returned questionnaires, said they had courses dealing with videotex, teletext, cabletext or related technologies. Becker's analysis indicated that most the materials dealing with electronic technology are handled in lecture courses. He noted that in only 24 cases do students receive "hands on" experience.

He also said that most schools deal with the topic of new technology

only in general terms, and that the primary emphasis remained with teaching students to report, write and edit copy correctly before they concerned themselves with mastery of new technological media.[9]

Cost, of course, is a major consideration for higher education institutions which entertain notions of teaching students on the tools of today. Paul Sullivan of Temple University says, "You cannot cost-justify them in the classroom. The only way you can afford this is through a grant or fund-raising effort."[10]

Even schools which have the resources for equipment are perhaps hard-pressed to stay current. Harmon Morgan, a professor at Texas Tech, said, "It's been a headache. I'm the maintenance person. The question now is how do we try to continue to provide some state of the art. We have seven or eight years' experience. We don't know where to go next."[11] This is despite the fact that Texas Tech is paying close to $2,500 a year per video display terminal for a maintenance contract.

Perhaps cost is a major reason why only 43 percent of the 312 programs accredited by the Association for Education in Journalism had VDT instruction available in 1983.[12]

And the costs will continue to increase as each new generation of new tech equipment becomes available. U.S. News and World Report indicated in its April 9, 1984, issue that state-of-the-art technology that once would have lasted 30 years is becoming obsolete almost as soon as it is installed. And the costs are continuing to spiral, despite the continuing price wars and international competition.[13]

Woletz predicts that only the large, well-capitalized manufacturers and suppliers will be able to continue, and that while millions of

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dollars will be turned over, only a few will emerge at the top--and that will keep the costs high.[14]

Despite the factors of obtaining and maintaining high cost equipment, facilities and personnel, the Becker survey seems to indicate that many U.S. colleges and universities are giving serious consideration not only to acquisition of new technology equipment but also to intense curriculum revision to include the concepts related to the same. Thus the author conducted a pilot survey.[15]

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Data were collected during the spring 1983 from accredited journalism and communications departments and schools which were representative not only of varied geographical distribution but also program size (enrollment). The random sample was selected from the 1982 AEJ/MC directory of accredited programs. Of the 40 institutions contacted, 19 responded. While the N is not large enough to permit definitive conclusions, the results nevertheless seem to indicate a possible trend.

New technology was defined in the questionaire as that beyond usual electronic typesetting with VDTs. Rather, the term referred to specifics such as pagination, cable and cable hardware, computer front end systems, electronic libraries, satellite systems, home-generated software, wireless communications systems, laser and fiber optic transmission--all the electronic wizardries which are transforming the media industry.

The mail questionaire had only three broad questions, with subquestions under each. The tabulated results are as follows:

1. Does your academic program offer a specific course which includes uses and applications of "new technologies" in media? YES: 3 NO: 16
(Those who responded "yes" completed the following questions).

Hours of credit for the course:
Level of course: undergraduate 2 graduate 1
Elective or required course: elective 3 required 0

Text for course: One school, the University of Alabama, responded that no text was used; rather, because it was a graduate level course, students were expected to research current materials and develop a current bibliography of readings and other materials from current journalism periodicals and other sources.

The other two universities--Kansas State University and Arizona State University, indicated they used Cable Communications and The Coming Information Age (Wilson P. Dizard) as primary texts respectively. They also used current journalism and periodicals as supplementary materials.

The comments about the success and appeal for the course were as follows:

University of Alabama: "This course is a special interest publications class and looks at the impact of new technologies on special interest publications of all kinds. The course is well received by grad students who do not really get this information in any other comprehensive way."

Kansas State University: "The course leans heavily on individual independent study by students in a seminar approach. Topics for study include laser application, teletext-videotext, satellites, electronic marketing, privacy issues and broadcast deregulation. We are offering it this semester for the first time in four years, and eight students are enrolled."

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Institutions which did not offer a specific "new technologies" course responded to the following questions.

2. If your program does not offer a specific "new technologies" course, do other courses include an instructional unit about "new technology?"

YES: 14 NO: 2

Among particular courses in which "new technology" was addressed were these. (The number of schools which included "new tech" information and the average percent of time devoted to the topic following the course title).

course	no. of schools	(average) percent of course
Mass Media and Society	(11)	18.75%
Editing	(6)	22.00%
Reporting	(6)	21.00%
Survey of Broadcasting	(5)	34.00%
Radio/Television	(4)	48.75%
Publications Management	(4)	13.75%
Photography	(3)	10.00%
Magazine Production	(3)	7.00%
Current Trends	(3)	30.00%
Mass Media Law	(3)	10.00%
Typography	(3)	30.00%

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Perhaps the most interesting response was the one for the questions about the liklihood of "new tech" courses.

3. Do you anticipate developing a course which focuses upon new technologies and their uses and applications?

YES: 7 NO: 7

If yes, when?

1983: 2 1984: 3 1985: 2

If not, why not:

Will incorporate information into existing courses: 3

Will create individual courses for specific seminars: 2

Cannot do adequate job with existing classes to try to develop new ones: 1

Will integrate into current courses and hire adjunct faculty to teach: 1

Also revealing were the open-ended comments from various respondents, who for reasons of their own, sometimes wished to remain anonymous. Among such comments were these:

"We're having difficulty covering the courses we now offer. Material of interest will be touched on in a number of existing classes."

"We will incorporate the skills into general methodology."

"Cannot spare the hours. Probably better to use in individual courses as applicable."

"We perfer to work this into other courses."

Two responses are particularly worth noting. The first is from Ed Bagley, Dean of theGraduate School of Journalism, University of California, Berkeley.

"Ben Bagdikian discusses new technology in his mass media and society courses, but I can't assign a percentage.

"Broadcast technology is studied in the television news courses, but only as a means of producing news programs.

"We are considering bringing Prof. John Ahlhauser in from Indiana University for a semester for his course on new technology.

"As for VDTs, students practice on those at the San Francisco Examiner in night courses for which we give no credit."

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Everett E. Dennis, Dean of the School of Journalism, Univeristy of Oregon, responded in a letter rather than on the questionaire. His responses read in part:

"No, we don't have a specific course devoted solely to this (communication technology) although we will offer a seminar on "The Information Society" next year and will probably develop a new course on the future of mass communication as a part of the larger future of mass communication education project we have here. Our faculty has had sessions recently on subjects such as teletext and videotext and is eager to keep pace with these developments.

"In 10 to 12 courses in our program ranging from the introductory mass media and society course to our newspaper editing course, a considerable amount of time is spent on new technology. This is true in our advertising courses, public relations courses, magazine courses, even photojournalism courses. The approach in all instances is two-fold one is conceptual--what will be the impact and influence of the new communications technologies from a sociological, economic perspective; the other is the issue of hands-on instruction..."

It is evident from even this small sampling of colleges and universities th t new technology is attracting attention. Those schools which do not presently have or do not plan to have courses devoted to the impact of technology on journalism nevertheless acknowledge its importance. The topic is included in 11 different courses--admittedly in varying percentages--but it is included.

What is perhaps more significant is the number of institutions--seven which intend to initiate specific courses about new technology. Of the 19 schools responding, this would bring the total to 10 which will offer particular classes about new technology.

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Generalizations are unwise, but it seems safe to speculate that as new technological developments occur in professional journalism, the colleges and universities across the nation will likewise try as best they can to keep pace with what is happening. Despite severe budget cuts, diminishing enrollments and inability to have immediate access to some of the new tech equipment which their professional counterparts use daily, journalism-communications programs seem bent on giving students practical, functional knowledge of what the future will bring.

Some basic questions remain: Will the use of new and high technology corrupt the more time-honored educational principles of learning through lecture, discussion, reading and critical writing and rewriting? Will new technology make unnecessary visits to libraries and late-hour study sessions which for so long have characterized higher education? And will the access to electronic retrieval of data render unnecessary the time-consuming, yet intellectual pattern of reading a variety of materials and analyzing and then synthesizing that information into a new construct?

The challenge seems straightforward for mass communication programs. Those programs must decide to make investments in technology which are used to improve learning, not mechanical skills such as computing, recalling files or data bases and word processing. In my judgment, computer or new tech literacy merely means knowing how to use the various systems as tools to complete tasks that need to be done. In the mass communications setting, the trick is to think of the use of new technology as simply another set of skills--as a tool for research, writing, organizing one's thoughts and communicating with others.

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5. Ron Oglesby, " Matching the Tools and the Students," Telecommunications and Technology (Asbury Park, N.J.: Associated Press Managing editors, 1983), pp. 49-50.

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11. Oglesby, p. 49.

12. Becker.

13. "A World of Communications Wonders," U.S. News and World Report, vol. 96, no. 14 (April 9, 1984) pp. 59-62.

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